Form ESA-B4. Public Report for ESA-256-2
FINAL

Company	Schreiber Foods Inc.	**ESA Dates**	Dec. 11-13, 2007
Plant	Logan, Utah	**ESA Type**	Pumps
Product	Cheese	**ESA Specialist**	Gunnar Hovstadius

Brief Narrative Summary Report for the Energy Savings Assessment:

Introduction:

Headquartered in Green Bay, Wis., Schreiber is a privately held dairy company with sales in excess of $3 billion. Its products – which include process, natural, cream and specialty cheese and yogurt – are sold primarily through customer brand distribution programs.

The overall site pumping system at the Logan, UT plant was the focus of a 3-day Energy Savings Assessment (ESA).

Objective of ESA:

Identify pump system improvement recommendations, train plant personnel how to correctly model the current pumping system and predict potential savings using the DOE PSAT software.

Focus of Assessment:

Pumping systems and training of personnel on using the DOE PSAT software.

Approach for ESA:

A walk through the facility with visits to all the operation was made to get an understanding of what was going on in the different parts of the facility.

The ESA expert presented the relationships between energy efficiency, reliability and maintenance costs. Demonstrated how the tools are used.

There were a number of centrifugal pumps identified within various processes.

Started by looking at some parts of the factory that use hot water circulating pumps that may have been over sized. The ESA expert worked closely with the plant personnel involved in the ESA to examine and input the data collected into PSAT. Results were compared to pump curves and the flow estimated from power and pressure measurements. The plant employees were very engaged in the process.

We also looked at some other issues regarding PD pumps. Here the only way energy use can be lowered is by lowering viscosity and/or increasing the pipe size.

General Observations of Potential Opportunities:

Opportunity

The circulating pumps providing hot water are oversized. The pump systems are designed to handle a much larger pressure drop than what is present today. They encounter some problems with burnt out motors and cavitation.

Power measurements were made by measuring amps at the control cabinet.

It was a bit uncertain what size impellers were installed in the pumps. The spare impellers were 5 ¼ inch, but the operating impellers could have been trimmed a bit.

The power measurements indicated how much power was used by the pumps. A comparison with the pump curves indicated what the flow should be. A “sanity check” using average production rates and temperature change of the water and the product respectively indicated similar flows. It is therefore assumed that the flow rate is of this order of magnitude. A check using the PSAT program indicates a low efficiency.

The systems were discussed with the plant personnel and it was agreed that a test should be done where the throttling orifice would be removed on one pump and the pump run on a spare VFD as a test. This way it could easily be found out what the needed speed would be using the existing pumps. If possible the motors would then be replaced with slower speed motors resulting in energy reductions.

Savings from a change of these motors would not only come from energy reductions but also from maintenance savings.

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